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AUTHOR Degirmencioglu, Serdar; And Others
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ABSTRACT

This study assessed the stability of adolescents' social networks over a school year, focusing on the stability of close friendships, best friendships, friendship groups, and the adolescent's role in his or her social network. As part of an ongoing Adolescent Peer Influence Project, 6th-, 8th-, and 10th-grade students from a working class suburban school district were followed longitudinally over an academic year. Approximately half of the students participating in this study were females; 75 percent were African-American. Students were asked to name a best friend and up to nine friends in the fall and again in the spring of the same academic year. Analysis revealed that all levels of adolescents' friendship networks in this study showed moderate stability, but that overall, girls' friendship networks were more stable. Stability of close friendships and cliques increased with grade level. However, stability of best friendships did not differ by grade. Reciprocal friendships were more stable, and stability of friendship networks were either weakly correlated or uncorrelated with self-report and teacher-report measures of delinquency and scholastic competence. (MM)

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STABILITY OF ADOLESCENT SOCIAL NETWORKS OVER THE SCHOOL YEAR

Serdar Degirmencioglu, Jerry M. Tolson & Kathryn A. Urberg

Adolescent Peer Influence Project

Department of Psychology

Wayne State University

71 West Warren

Detroit, MI 48202.

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ABSTRACT

Stability of adolescent friendship networks over a school year was assessed at four levels (close friendships, best friendships, friendship groups, and network role). Students in 6th, 8th, and 10th grade listed their friends in Fall and Spring. Using these nominations, students were assigned to groups and to network role categories. At all these levels, there was moderate stability. Overall, stability increased by grade and girls' networks were more stable. Attempts to identify correlates of network stability at these levels did not prove to be fruitful.

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INTRODUCTION

The concept of social network is a very effective tool in describing a person's social world. It is being used in many different fields and has attained explanatory significance in many theories. A part of the larger personal network, the friendship network, appears to be particularly important in adolescence. When asked to list the members of their social network, most adolescents list same-gender friends more than any one else (Blyth, Hill &Thiel, 1982). It is also known that adolescents see their friends as major providers of stimulation, companionship, intimacy, and support (Buhrmester and Furman,1987). Little is known, however, about the stability of adolescents' friendship networks and whether the stability of the friendship network matters.

AIMS

To assess stability of adolescents' social networks over a school year at the following levels:

1) All close friendships: Do adolescents keep the same friends?

2) Best friendships: Do adolescents keep the same best friend?

3) Friendship groups: Do adolescents remain in the same friendship group?

4) Network role: Do adolescents remain well-integrated over time, even though they may change friends or groups?

To identify the correlates of network stability at these levels.

METHOD

Sample: As a part of the ongoing Adolescent Peer Influence Project, 6th, 8th and 10th grade students from a working class suburban school district were followed longitudinally over an academic year. Roughly half were girls (56%). The majority (75%) were African-American.

Nominations : Students were asked to name a best friend and up to 9 friends in Fall and again in Spring of the same academic year.

Network Analysis: To describe students' networks adequately, friendship nominations were analyzed following a hierarchical, pilot-tested procedure (Urberg et. al., 1992). First, cliques (tightly connected friendship groups) and loose groups were identified. Then, dyads which consisted of two students whose only mutual friendship was with each other were identified. The rest of the students were classified as isolates (whom no one had chosen as a friend), and as remainders (who could not be classified into any other category). This classification allowed us depict the *type of network* the student had, regardless of the students' particular friendships or group affiliations. We call these types social network roles and students were classified into one of the following roles at both times: **Clique members**, **loose group members**, **dyad members**, **isolated** students and the **remainders** (Figure 1).

Other Measures: These included several subscales from Offer Self-Image Questionnaire and from Zuckerman Sensation Seeking Scale, value of school, parents and time with friends scales, and two teacher rating composites.

ANALYSES

Level 1: Stability of All Friendships

To assess the overlap between Fall and Spring lists, we calculated the proportion of the Fall list that was repeated in Spring. On average, 46% of the friendships were stable. Proportion stable increased slightly with grade (means= .43 < .47 < .52) and girls had more stable friendships (.5 > .43).

The number of Fall choices made were only weakly correlated with stability (r=-.11). The number of reciprocated friendships in Spring was a better correlate of stability (r=.31).

Following Berndt (1992), we correlated psychological measures with stability. The correlations were at best weak. The highest were for self-reported minor delinquency [r=-.12 (Fall) & -.15 (Spring)] and teacher-rated scholastic competence (r=.15).

Level 2: Stability of Best Friendships

As in the first level, renaming the same friend at both times indicated stability. 32% of the adolescents renamed the same best friend (**BF**) and 71% included the Fall BF either as a BF or a close friend in Spring. We also found that girls' BFships were more likely to be stable. There was no grade difference.

A second set of analyses were run to assess the relationship between mutuality and stability. Students were matched with the BF they had named to see if their choices were reciprocated. The results showed that mutual BFships were more likely to be stable. We also found that BFships of longer duration were also more likely to endure over the school year.

Level 3: Stability of Friendship Groups

Because group stability was not as easily definable as the stability of friendships, three increasingly stringent indices were used: **Largest proportion intact** indexed the degree of intactness for each group. The second index (**60% -same**)required ***a minimum of 60%*** of the members to be still together in a group. The third index (**60%-core**) added a stricter condition to the second: The members remaining together in a group had to be *the majority (or the core)* of the Spring group for that group to be considered as the same as the Fall group.

All indices indicated that cliques became more stable by 10th grade (Table 1). Loose groups were less stable than cliques and did not increase in stability by grade.

We also attempted to identify correlates of group stability. First, we looked at group structure: Gender homogeneity did not correlate with proportion intact, but stable cliques (using 60%-same index) were slightly more gender-homogeneous. We also looked at group size in Fall but did not find significant relationships between size and stability.

The second set of possible correlates was members' characteristics. For each group, members' data were aggregated to obtain group means (i.e., taking the group as the unit of analysis). However, aggregated group means did not relate to group stability in any interpretable way in correlation and linear discriminant function analyses.

We suspect that the small number of groups in the longitudinal sample and restricted variance in some variables (e.g., 80% of the groups were gender-segregated) precluded an adequate evaluation of potential stability-correlate relationships .

Level 4: Stability of Network Role

This set of analyses ignored the particular friendships, group or dyad memberships and focused instead at stability at a larger level, on the *type* of network or connections students had. Here the question was whether or not the student remained well-connected, loosely-connected or almost totally isolated over the school year.

Retaining *any* role differed by gender but not by grade: Girls, especially in middle school, retained their roles better than boys.

When role categories were looked at separately (i.e., retaining a particular role), clique membership appeared to be the most stable: 59% of the clique members were still clique members in Spring, regardless of any changes in the particular cliques they were members of (Table 2).

Overall, the best predictor of role stability was role itself: Well-connected students remained so in all grades. Grade and gender did moderate this link: Clique membership was most stable in 10th grade and loose group membership was most stable in middle school. Girls' advantage in retaining their role was only true for clique and loose group membership (Table 3).

CONCLUSIONS

1) At all levels of adolescents' friendship networks studied here, there is moderate stability.

2) With grade, stability of close friendships and of cliques increases. Stability of best friendships does not differ by grade.

3) Overall, girls' friendship networks are more stable.

4) Reciprocal friendships are more stable.

5) Stability of friendship networks are only very weakly correlated or uncorrelated with self-report and teacher-report measures used in this study.

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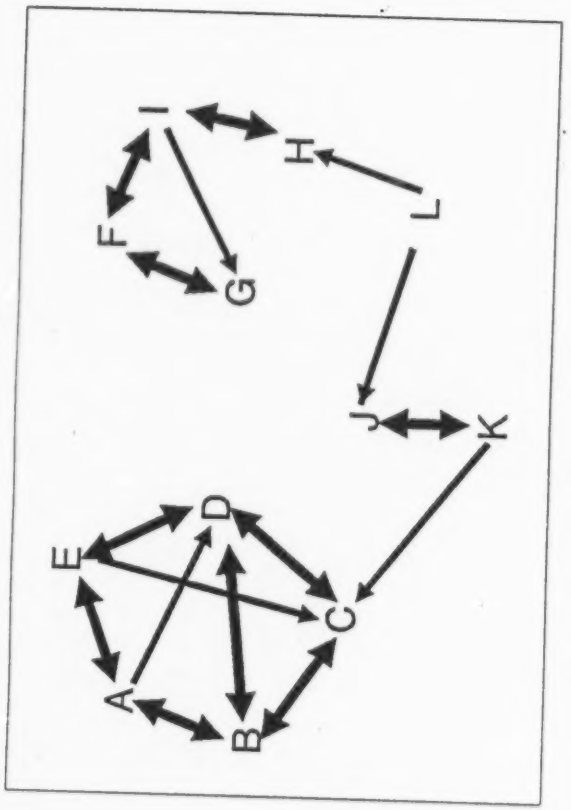
FIGURE 1
EXAMPLES OF SOCIAL NETWORK ROLES



A-E:CLIQUE F-I: LOOSE GROUP J-K: DYAD L:ISOLATE
DOUBLE-HEADED ARROWS: MUTUAL CHOICES

TABLE 1

STABILITY INDICES FOR CLIQUES AND LOOSE GROUPS

Index	Grade 6th	8th		10th
Mean Proportion Intact as a Clique	.37	.45	<	.70
Proportion of Cliques at least 60% Intact	.30	.29	<	.78
Proportion of Cliques 60% Intact as a Core	.20	.29	<	.75
Mean Proportion Intact as a Loose Group	.40	.29		.35
Proportion of Loose Groups at least 60% Intact	.43	.29		.20
Proportion of Loose Groups 60% Intact as a Core	.14	.29		.20

Note: Grade comparisons are significant where marked

TABLE 2. PERCENTAGE OVERLAP BETWEEN FALL & SPRING ROLE CLASSIFICATIONS (ROLE STABILITY)*

Fall Role	Spring Role: Clique Member	Loose Group Member	Dyad Member	Isolate	Remainder
Clique Member	59	22	2	2	13
Loose Group Member	21	49	10	2	16
Dyad Member	32	23	20	2	19
Isolate	9	21	17	23	30
Remainder	19	27	5	11	36

* Row percentages do not always add up to 100 because of a 6th minor category that is excluded from the analyses.

TABLE 3. PERCENTAGE OVERLAP BETWEEN FALL & SPRING ROLE CLASSIFICATIONS SEPARATELY BY GENDER (ROLE STABILITY)*

Fall Role	Spring Role: Clique Member	Loose Group Member	Dyad Member	Isolate	Remainder
	Boys/Girls	Boys/Girls	Boys/Girls	Boys/Girls	Boys/Girls
Clique Member	40/71	29/18	4/0	2/2	19/9
Loose Group Member	15/25	37/58	16/4	3/1	22/11
Dyad Member	17/56	28/17	17/22	0/6	31/0
Isolate	3/17	28/11	21/11	24/22	24/39
Remainder	15/29	27/29	6/3	12/9	38/31

* Row percentages do not always add up to 100 because of a 6th minor category that is excluded from the analyses.